Insurance companies, law enforcement officials and industry watchdogs have called scrap metal theft—including copper, aluminum, nickel, stainless steel and scrap iron—one of the fastest-growing crimes in the United States. State leaders have taken notice, passing a flurry of legislation meant to curb metal theft and help law enforcement find and prosecute criminals. Researchers at The Council of State Governments, in collaboration with the Institute of Scrap Recycling Industries, set out to determine if all that legislation is having an impact on metal theft rates.

To determine if state legislation has been effective at curbing metal theft, a thorough analysis is needed that starts with an evaluation of trends in metal theft incident rates at the state level. After an evaluation of the existing research and interviews with state and local officials and law enforcement personnel across all 50 states, CSG researchers concluded that metal theft data for states are not available for analysis.

Because metal theft is such a significant and widespread problem, and because accurately tracking metal theft is key to establishing evidence-based practices designed to both deter theft and to assist in the investigation and prosecution of theft, it is imperative that states evaluate ways to begin collecting these data.

Moving forward, it is unlikely data will be available on a scale necessary to perform meaningful analysis unless a widespread effort is launched to create systems to document, track and report metal theft crime uniformly and consistently. CSG researchers recommend continued discussion regarding the development of a uniform tracking system for metal theft or modifications to current systems.

**Metal Theft: A National Problem**
Reports of scrap metal theft like these have become common in both the local and national news over the past few years. Insurance companies, law enforcement officials and industry watchdogs have called scrap metal theft—including the theft of copper, aluminum, nickel, stainless steel and scrap iron—one of the fastest-growing crimes in the United States.

Metal theft poses significant costs to individuals and businesses. The U.S. Department of Energy estimates the cost of copper theft alone is about $1 billion a year. Additionally, the FBI reports copper theft threatens critical U.S. infrastructure, including electrical substations, cellular towers, telephone landlines, railroads, water wells and construction sites. The theft of copper from these targets “disrupts the flow of electricity, telecommunications, transportation, water supply, heating, and security and emergency services and presents a risk to both public safety and national security.”

State Legislation

State lawmakers have reacted to the metal theft problem, passing a flurry of legislation meant to curb metal theft and help law enforcement find and prosecute criminals. A big chunk of that legislation focused on placing new regulations and requirements on transactions at scrap metal recycling facilities where thieves might attempt to sell their stolen goods.

All 50 states have passed legislation designed to curb metal theft through the regulation of transactions at scrap metal recycling facilities; states continue to introduce additional legislation or modifications to existing laws at a steady pace. During the 2013 and 2014 sessions, for example, legislators introduced more than 220 bills aimed at stopping metal theft and passed 51 of them. Common state laws include:

- **Records on Transactions:** Requirements for scrap metal recyclers and dealers to create and maintain records on transactions, including reporting transactions to an electronic database, a minimum time period that records must be kept, a description of the material being purchased, taking a photo and/or video evidence of the seller and/or the material being purchased, and obtaining a description and/or the license plate number of the seller’s vehicle.
- **Identification:** Stricter identification requirements for scrap metal sellers, including a license or picture ID requirement, fingerprinting and establishing proof of ownership.
• **Payment Restrictions:** Restrictions on payments, which may include a waiting period for payments to the seller, restrictions on the form of payment the seller can receive and a maximum number of transactions during a specified time period.

• **Registration/Licensing:** Registration or licensing requirements for scrap metal recyclers and dealers through a state or local entity.

• **Hold Provisions:** Requirement that a scrap metal recycler or dealer hold all or certain types of purchases or when law enforcement requests it, for a specified period of time.

• **Criminal Penalties:** Enhanced penalties for metal theft offenses

While legislators have reacted quickly by putting laws to address the problem of metal theft in place, the effect those laws are having on metal theft rates is unclear aside from anecdotal observations and assumptions.

**CSG Investigation—Is State Legislation Working?**

To determine if state metal theft legislation has been effective at curbing metal theft or if there is a relationship between the various state laws put into place and the level of metal theft on a state-by-state basis, a thorough analysis is needed. That analysis would require an evaluation of trends in metal theft incident rates—or a sufficient proxy measure—and the effects of state laws on those trends independent of other factors that might also affect theft rates.

To perform this analysis, however, a sufficient source of state-level metal theft data that tracks how much metal theft is actually taking place over time is needed. CSG researchers reviewed existing literature and found current research on rates of metal theft is limited to local metal theft trends—city or county trends—or relies heavily on data from insurance claims. In particular, researchers have utilized information from the National Insurance Crime Bureau, which has produced a series of reports based on data extracted from the Insurance Services Office ClaimSearch. ISO ClaimSearch is a claims database for the property/casualty insurance industry to which insurers and other participants submit claim reports.

Data from the National Insurance Crime Bureau often are used as a proxy for overall metal theft rates and the media uses that information to track theft rates over time and to rank states. For example, in the bureau’s April 2013 report, Ohio, with 3,228 metal theft claims, is ranked at the top of the list for the most metal claims from Jan. 1, 2010, through Dec. 31, 2012, followed by Texas with 2,624, Georgia with 1,953, California with 1,888 and North Carolina with 1,682.

While the data reported by National Insurance Crime Bureau may be accurate, the bureau tracks only *insurance claims* reported to the database—not all metal thefts. Relying solely on insurance claims as an indicator of metal theft rates has limited applicability to analyzing policy across states, particularly because this method underreports the true frequency of metal theft and the level by which it underreports those rates is unknown.

Insurance claims underreport actual metal theft rates for several reasons, chiefly because not all reported metal theft results in an insurance claim; the value of the damaged property may not be
Finding no comprehensive source of state-level metal theft data, CSG researchers interviewed state officials and personnel in each of the 50 states to determine if any state is collecting data that could be used to calculate statewide metal theft rates. Although a number of states have focused on metal theft by creating task forces designed to study metal theft trends and possible legislative solutions, no state collects comprehensive data on metal theft.

After determining that no reliable data were available from states, CSG researchers focused on evaluating potential sources of data from local jurisdictions that might be aggregated to the state level for analysis. CSG researchers interviewed more than 200 law enforcement personnel—including law enforcement officers and crime analysts in law enforcement offices—across all 50 states, focusing on the most heavily populated jurisdictions, to determine if local jurisdictions were collecting these data.

Those interviews revealed that, while some local jurisdictions are tracking metal theft—usually on an ad hoc basis, their methodologies vary significantly. That variance makes aggregation to achieve state-level data, cross-jurisdictional comparison or tracking trends over time difficult and likely unreliable.
Over the course of CSG's investigation, a clear pattern emerged: Metal theft was a serious concern for local police departments, but statistically tracking trends in metal theft was difficult for a number of reasons.

In most cases, local police departments indicated they were not capable of producing reliable statistics over time on the number of metal thefts in their jurisdiction. Often, a crime analyst or investigator had a sense of how metal theft was trending in their jurisdiction but could not provide uniformly or regularly collected statistical evidence of those trends.

Departments that indicated they had the capacity to track metal theft in some way used two primary methods—coding metal theft specifically for entry into a reporting system or performing a keyword search of their records.

**Reporting Systems**

For most jurisdictions, the reporting programs in use did not allow for metal theft to be coded separately. For purposes of reporting to the Uniform Crime Reporting Program, crimes such as murder, forcible rape, robbery, aggravated assault, burglary, motor vehicle theft, larceny-theft and arson are uniformly coded and statistics on these crimes can be reported in a standardized way.
Without a secondary code assigned specifically to metal theft, statistics are difficult to compile in a similar manner.

Some of the crime analysts interviewed noted that using a secondary coding system to track metal theft would not resolve the problem automatically. For a secondary coding system to be accurate, officers would need to be trained to uniformly and consistently document metal theft in their incident reports.

**Keyword Searches**

Without assigning metal theft a secondary code in a department’s incident reporting system, some departments reported they had the capacity to query their system using keywords to count metal theft. Keyword searches may produce a report that counts many—if not most—incidents of metal theft. Interviewees reported, however, that keyword searches may have significant limitations and could result in either the under- or overreporting of metal theft.

For example, a report made and entered into a reporting system that actually includes metal theft may not contain the keyword used to perform the query. A copper pipe may be the target of a theft, but a submitted report may only contain the word “pipe” in the description. A subsequent keyword search focusing on copper theft might include the word “copper” and not the word “pipe” in a query, thereby underreporting the number of incidents of metal theft. In another scenario, a copper pipe may have been used as a weapon in the commission of a crime like burglary. The report associated with this crime may therefore include the word “copper” and a keyword search using the word “copper” would erroneously count the report as one associated with metal theft.

Some departments that employed a keyword search reported they could only track trends related to metal theft for a specified type of property, such as air conditioning units or catalytic converters.

While reporting systems in some departments may allow personnel to easily and quickly perform keyword searches, this is not the case for all departments. In some cases, keyword searches are a time-consuming and difficult task to perform and, therefore, may not be feasible given the time constraints of personnel.

Due to these limitations, reports produced using keyword searches may not be a reliable source of statistics on metal theft.

Based on information obtained from a review of available research, interviews with state-level officials and local police departments, CSG researchers conclude that metal theft data for states is not available because:

- The sources of data used in current research that strive to approximate rates of metal theft at the state level, including insurance claim data, are insufficient to accurately reflect the true rate of metal theft for the purposes of state-level analysis.
- No state tracks the number of metal thefts that occur in its jurisdiction.
- At the local level, the quality and accuracy of data that is accessible is unknown and cannot be used for cross-jurisdictional comparisons or comparisons over time and cannot be used to explain trends at the state level.

Because the most basic data needed to perform an analysis are not available, no conclusions regarding the deterrent value and efficacy of existing state legislation can be drawn.

**Where Do We Go From Here?**
The bottom line is this: You can’t effectively evaluate what you don’t measure and states simply don’t collect the kind of data needed to perform a rigorous analysis of trends in metal theft. Because metal theft is such a significant and widespread problem, and because accurately tracking metal theft is key to establishing evidence-based practices designed to both deter theft and to assist in the investigation and prosecution of theft, it is imperative that states evaluate ways to begin collecting these data.

Moving forward, it is unlikely data will be available on a scale necessary to perform meaningful analysis unless a widespread effort is launched to create systems—at the local, state and likely, national levels—to document, track and report metal theft crime uniformly and consistently. Creating systems to uniformly track metal theft would require potentially significant modifications to current reporting systems and programs, including training personnel to use those systems effectively.

CSG researchers recommend continued discussion regarding the development of a uniform tracking system for metal theft or modifications to current systems. This discussion should include all key stakeholders, including law enforcement officials engaged in tracking and investigating metal theft at the local level, local and state crime analysts who are familiar with the limitations of current reporting systems, scrap metal facilities and scrap recycling trade associations.

Solutions from the Scrap Recycling Industry

ScrapTheftAlert.com

As a key stakeholder in the metal theft discussion, the scrap recycling industry through its trade association, the Institute of Scrap Recycling Industries, known as ISRI, has worked to develop solutions to metal theft. The most notable effort originating from the industry is the development of ScrapTheftAlert.com, a national industry-funded automated online mechanism designed to stop metal theft in its tracks by alerting scrap recyclers of stolen material for which they can be on the lookout and report to police if it comes through their doors.

ISRI’s ScrapTheftAlert.com system is available to all law enforcement agencies, any scrap recycler regardless of ISRI membership and people interested in receiving notifications of stolen metal for which to be on the lookout.
When law enforcement officers enter information related to a metal theft into ScrapTheftAlert.com, the program puts out an email alert to all system users within a defined radius—not only in the state where the theft occurred, but also in surrounding states—giving scrap yards notice to be on the lookout for the material. The system also can issue reverse alerts so scrapyards that believe they have stolen materials can return those materials to the proper owner. Local law enforcement agencies have praised these efforts and a series of success stories can be found on the ScrapTheftAlert.com website.

The system has become more effective as the number of law enforcement agencies using the system has increased. To date, nearly 8,000 law enforcement personnel are registered users; the system has more than 17,500 registrants. In March 2014, ISRI launched version 2.0 of the system, which includes a more robust alert system with enhancements requested by law enforcement and operated by a trusted database operator that caters specifically to the needs of federal, state and local law enforcement.

The system initially was designed as a voluntary tool. ISRI has supported legislation in at least four states that now mandate every scrap dealer in the state be registered for and receive alerts from an alert system like ScrapTheftAlert. Minnesota has launched its own state-run alert system.

Metals Theft Law Enforcement Advisory Council

In 2014, as part of an advanced comprehensive approach by the scrap recycling industry to address the problem of metal theft through training and greater outreach efforts, ISRI facilitated the formation of a Metals Theft Law Enforcement Advisory Council that consists of a select group of experienced law enforcement officers, prosecutors and security personnel from around the country with an understanding of the metal theft issue.

The Metals Theft Law Enforcement Advisory Council is working collaboratively with ISRI to develop a comprehensive program to address metal theft, including a multi-layered training program to assist law enforcement in combatting metal theft. Some of the tools coming soon include a guide and toolkit for the prosecution of metal theft in collaboration with the National District Attorneys Association, and a glossary index of industry terminology with photos and descriptions in coordination with the International Association of Chiefs of Police and the National Sheriffs’ Association. These tools will aid law enforcement in identifying how commonly stolen materials might be altered before thieves bring the items to a recycler and labeled for the scrap commodity markets.

Compliance Assistance

Recyclers have noted the significant uptick in legislation designed to address metal theft and legislation amending existing laws has created compliance and enforcement difficulties. To ensure compliance, ISRI published a guide, State Metals Theft Statutes, in December 2013. ISRI President Robin Wiener said the goal of the publication is, “to help recyclers understand their most up-to-date compliance requirements as the recycling industry continues its efforts to be part of the solution to the problem of metals theft.”

Wiener indicated the information in the statutes report will be updated periodically as new state laws are passed or amended. In the coming months, ISRI plans to supplement this information with an interactive, searchable database of statutory requirements related to metal theft, which will be
available on its website at [www.isri.org](http://www.isri.org) [5], ISRI also plans to launch an informational website portal—StopMetalsTheft.org—in summer 2014 for law enforcement, recyclers and property owners to access valuable tools and best practices to help stop metal theft.

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References


7. Alaska HB 305, which includes recordkeeping, 5 year record retention, and inspection by law enforcement requirements, will make Alaska the 50th state to pass metals theft legislation. As of May 7, 2014, HB 305 had passed the House and Senate and was awaiting transmittal to the governor.

8. Other factors might include a heightened focus by local law enforcement on metal theft, preventive measures to secure scrap metal, changes in overall crime rates or economic activity, price fluctuations in the secondary metal market, foreclosure rates or the prevalence of abandoned properties.

9. Researchers at the NICB use a keyword search to extract metal theft data from the ISO database. NICB notes that “there is no exact method for extracting metal theft claims from ISO ClaimSearch,” and a claim was determined to be a metal theft claim if the loss description for the claim contained the terms “cop,” “brass,” “bronze,” or “alum,” as well as one of the terms “stole,” “theft,” “thief,” “thieves,” “took,” “steal” or “missing.” Loss types that were determined by the analyst to include “almost exclusively unrelated claims” were excluded from the totals.


11. For example, there were an estimated 1,099 incidents of scrap metal thefts reported to CSG by a single local jurisdiction for 2010-12. By comparison, the National Insurance Crime Bureau reported that there were 784 claims identified in the ISO ClaimSearch for the entire state in which the same local jurisdiction is located over the same period. Another local jurisdiction reported an estimated 901 incidents of metal theft for 2013, while the National Insurance Crime Bureau reported that there were
359 claims for the three-year period of 2010-12 for the entire state.

12 Note that even if sufficient data become accessible in the future, an evaluation of the effects of past legislation will be difficult to perform because longitudinal data—particularly metal theft rates prior to the passage of legislation—may be needed to evaluate the effect of that legislation.